

CLAIMS

What is claimed is:

- 1           1.    A method comprising:
  - 2           accessing indexing data associated with a data unit
  - 3           previously stored within a storage device, the data unit
  - 4           including content in a scrambled format;
  - 5           using at least a portion of the indexing data,
  - 6           determining whether the content in the scrambled format is
  - 7           capable of being descrambled by a descrambler using a
  - 8           currently valid descrambling key;
  - 9           retrieving the data unit; and
  - 10          forming a data stream for processing by the
  - 11          descrambler, the data stream including a trigger data
  - 12          sequence inserted prior to the data unit, the trigger data
  - 13          sequence to identify that the data unit is capable of
  - 14          being descrambled by the descrambler using an updated
  - 15          descrambling key differing from the currently valid
  - 16          descrambling key.
- 1           2.    The method of claim 1, wherein accessing of the
  - 2           indexing data comprises accessing keying material
  - 3           associated with the data unit from a table stored within
  - 4           the storage device.
- 1           3.    The method of claim 2, wherein the determining
  - 2           whether the content in the scrambled format is capable of
  - 3           being descrambled by the descrambler using the currently
  - 4           valid descrambling key comprises comparing the keying
  - 5           material with a keying material used to produce the
  - 6           current valid descrambling key.
- 1           4.    The method of claim 3, wherein the determining
  - 2           whether the content in the scrambled format is capable of

3 being descrambled by the descrambler using the currently  
4 valid descrambling key comprises comparing the keying  
5 material with the current valid descrambling key.

1       5.    The method of claim 1, wherein the data unit is  
2 non-sequential in time to a current data unit being  
3 descrambled by the descrambler using the currently valid  
4 descrambling key.

1       6.    The method of claim 1, wherein the trigger data  
2 sequence includes keying material and a slot number.

1       7.    The method of claim 1, wherein the trigger data  
2 sequence includes keying material, a slot number and at  
3 least one command code to alter functionality of the  
4 descrambler.

1       8.    The method of claim 1 further comprising:  
2       inputting the data stream into a playback buffer;  
3       retrieving the data stream by the descrambler; and  
4       in response to detection of the trigger data  
5 sequence, obtaining the updated descrambling key using  
6 information contained within the trigger data sequence.

1       9.    The method of claim 8, wherein the obtaining of  
2 the updated descrambling key comprises using keying  
3 material contained in the trigger data sequence to recover  
4 a decrambling key pre-stored within a non-volatile memory  
5 accessible to the descrambler.

1       10.   A software program stored in a machine readable  
2 medium and executed by a processor, the software program  
3 comprising:

4           a first module to access indexing data associated  
5 with a pre-stored data unit, the pre-stored data unit  
6 including content in a scrambled format; and  
7           a second module to generate a trigger data sequence  
8 and insert the trigger data sequence into a data stream  
9 processed by a descrambler prior to the pre-stored data  
10 unit in response to detection that the content in the  
11 scrambled format cannot be descrambled by the descrambler  
12 using a currently valid descrambling key.

1           11. The software program of claim 10, wherein the  
2 indexing data comprises keying material associated with  
3 the pre-stored data unit from a table stored within a hard  
4 disk drive.

1           12. The software program of claim 10, wherein the  
2 pre-stored data unit is non-sequential in time to a  
3 current data unit being descrambled by the descrambler  
4 using the currently valid descrambling key.

1           13. The software program of claim 10, wherein the  
2 trigger data sequence includes keying material and a slot  
3 number.

1           14. The software program of claim 10, wherein the  
2 trigger data sequence includes keying material, a slot  
3 number and at least one command code to alter  
4 functionality of the descrambler.

1           15. A digital device, comprising:  
2           a storage device adapted to store content received  
3 from a transmission and metadata associated with the  
4 content, the content includes a video program in a  
5 scrambled format;

6           a descrambler adapted to descramble incoming content  
7    using a descrambling key stored in any one of a plurality  
8    of key slots accessible by the descrambler; and  
9           a host processor in communication with the storage  
10   device and the descrambler, the host processor to access  
11   the metadata data and to generate a trigger data sequence  
12   for insertion into a data stream prior to video program in  
13   response to detection that the video program is capable of  
14   being descrambled only by an updated descrambling key  
15   being different than descrambling keys currently stored in  
16   the plurality of key slots.

1           16. The digital device of claim 15, wherein the  
2   trigger data sequence includes keying material associated  
3   with the video program and a slot number identifying which  
4   of the plurality of key slots the updated descrambling key  
5   is assigned.

1           17. The digital device of claim 15, wherein the  
2   trigger data sequence includes keying material associated  
3   with the video program, a slot number identifying which of  
4   the plurality of key slots the updated descrambling key is  
5   assigned, and at least one command code to alter  
6   functionality of the descrambler.